

IN THE CLAIMS

1. (currently amended) A renal replacement therapy system, comprising:
a blood treatment device with at least one peristaltic pump mechanism;
a cartridge with a fluid circuit supported thereby, the fluid circuit having with respective
portions to engage said at least one peristaltic pump mechanism;

said fluid-circuit blood treatment device including separate engagement elements that
may be brought together around said respective portions to engage said at least one peristaltic
pump-mechanism fluid circuit portions by [[a]] forcing a first of said engagement elements
against a second of said engagement elements;

said fluid-circuit and said blood-treatment device being arranged such that multiple
separate fluid-flows may be maintained by an operation of said at least one peristaltic pump
merely by means of said forcing, whereby an installation and set-up of said fluid circuit is
simplified.

the blood treatment device having a support configured to permit the cartridge to rest
thereon and an alignment member shaped to align the cartridge with the at least one peristaltic
pump mechanism when moved horizontally, the support and alignment member being such that a
single vertical motion to rest the cartridge on the support followed by a single horizontal motion
to engage the alignment member positions the cartridge such that the separate engagement
elements may be brought together around the respective portions to engage the at least one
peristaltic pump mechanism.

2. (original) A system according to claim 1, wherein said fluid circuit includes an
extracorporeal blood circuit.

3. (original) A system as in claim 1, wherein said fluid circuit is configured for circulating blood from an individual through the blood treatment device to remove waste and to return blood and replacement fluid to the individual after removal of waste and said respective portions include a first portion for conveying waste, a second portion for conveying blood, and a third portion for conveying replacement fluid.

4. (original) A system as in claim 1, wherein said at least one actuator includes a peristaltic pump with a single rotating element that pumps blood through multiple ones of said respective portions, said respective portions carrying different fluids including at least blood and another fluid.

5. (original) A system as in claim 4, wherein said at least another fluid includes replacement fluid.

6. (original) A system as in claim 4, wherein said at least another fluid includes waste fluid.

7. (original) A system as in claim 1, wherein said first of said engagement elements includes a filter.

8. (original) A system as in claim 1, wherein said first of said engagement elements is permanently attached to said fluid circuit forming a sterile consumable component which is replaced after a fixed number of treatments.

9. (original) A method of performing renal replacement therapy using a blood treatment device with at least one peristaltic pump mechanism having separate engagement elements, a fluid circuit with respective portions to engage said at least one peristaltic pump mechanism, comprising the steps of:

locating said fluid circuit respective portions between said separate engagement portions;

attaching said engagement portions together to squeeze said respective portions therebetween;

operating a pump in one of said engagement portions to convey at least blood and at least one other fluid in order to perform a therapeutic treatment.

10. (original) A method as in claim 9, wherein said respective portions include fluid lines and said step of locating includes laying said fluid lines on a peristaltic pump.

11. (original) A method as in claim 9, further comprising disposing of said first of said engagement elements and replacing it with another after a fixed number of treatments.

12. (original) A method as in claim 11, wherein said fixed number is one.

13.- 15 (canceled)

16. (new) A system as in claim 1, wherein the alignment member includes a raised portion of the blood treatment device.

17. (new) A system as in claim 1, wherein the support includes a pair of rails.

18. (new) A system as in claim 1, wherein the support includes a pair of rails that support a part of the blood treatment device that carries a subset of the separate engagement elements.

19. (new) A system as in claim 1, wherein the support includes a pair of rails that support a part of the blood treatment device that carries a subset of the separate engagement elements, the part of the blood treatment device including a door with a control panel thereon.

20. (new) A renal replacement therapy system, comprising:

- a blood treatment device with at least one peristaltic pump;
- a cartridge with a fluid circuit supported thereby, the fluid circuit being engageable with the at least one peristaltic pump mechanism;
- the blood treatment device including engagement elements that brought into engagement with the fluid circuit portions by moving a first of the engagement elements toward a second of the engagement elements;
- the blood treatment device having a support configured to permit the cartridge to rest thereon and an alignment member shaped to align the cartridge with the at least one peristaltic pump mechanism when moved horizontally, the support and alignment member being such that a single vertical motion to rest the cartridge on the support followed by a single horizontal motion to engage the alignment member positions the cartridge such that the separate engagement elements may be brought together around the respective portions to engage the at least one peristaltic pump mechanism.

21. (new) A system as in claim 18, wherein the alignment member includes a raised portion of the blood treatment device.

22. (new) A system as in claim 18, wherein the support includes a pair of rails.

23. (new) A system as in claim 18, wherein the support includes a pair of rails that support a part of the blood treatment device that carries a subset of the separate engagement elements.

24. (new) A system as in claim 18, wherein the support includes a pair of rails that support a part of the blood treatment device that carries a subset of the separate engagement elements, the part of the blood treatment device including a door with a control panel thereon.

25. (new) A system as in claim 18, wherein the support includes a horizontal member.

26. (new) A system as in claim 18, wherein the first engagement element moves relative to the second engagement element on a pair of rails, the support including at least one of the pair of rails.

27. (new) A system as in claim 18, wherein the first engagement element moves relative to the second engagement element on a pair of rails, the support including at least one of the pair of rails, the first engagement element being fixed and the second engagement element being movable, the first engagement element carrying a control panel.